muito densamente distribuídos, excepto na parte anterior da segunda dorsal. O castanho carregado denegrido do dorso continua para cima nas membranas desta barbatana, e desbota gradualmente até branco para a borda distal. Íris, escura.

Em especímenes frescos a cor base nos lados e na parte inferior da cabeça é clara e prateada.

Parece ser raro. Os dois especímenes aqui descritos constituem os primeiros assinalados na Madeira.

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**ADDITIONS TO PREVIOUSLY REVISED FAMILIES**

No. VI, Art. 16.

By G. E. Mauí

**ORDER INIOMI**

**FAMILY PARALEPIDIDAE**

Genus *Macroparalepis* Ege, 1955


One specimen, no. 5058, 128 mm. total length without caudal. Taken from stomach of *Alepisaurus ferox* Lowe. 3.V.1945. Fair condition.

Head 4 7/8, greatest depth equals snout, 11 in total length without caudal. Eye 2 in snout and 4 2/5 in head. Dorsal 11; anal incomplete. Dentition and colour like type.

**FAMILY MYCTOPHIDAE**

Genus *Myctophum* Rafinesque, 1810

*Myctophum (M.) selenops* Taaning

Fig. 13.


One specimen, no. 3108, 59 mm. total length without caudal. Taken from stomach of *Alepisaurus ferox* Lowe. 18.1.1950. Good condition.

Head 5 1/3, greatest depth 3 1/4 in total length without caudal. Eye 2 2/5, depth at middle of caudal peduncle about 2 in head. Scales in lateral line 35. Dorsal 13; anal 18. Gill-rakers long and thin, 6 on upper and 16 on lower part of first gill-arch.

Photophores large, intervals between them mostly less than diameter of

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Fig. 13.—*Myctophum (M.) selenops* Taanning

Genus *Diaphus* Eigenmann & Eigenmann, 1891

*Diaphus (Lamprossa) effulgens* (Goode & Bean)

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*Aethoprora effulgens* Goode and Bean, 1895, Oce. ichth., p. 87, fig. 105.


Diaphus (Lamprossa) effulgens Goode & Bean.  


One specimen, no. 3107, 75 mm. total length without caudal. Taken from stomach of Alepisaurus ferox Lowe, 18.1.1950. Snout and lower posterior half of caudal peduncle dissolved by gastric juices.

Head large, slightly more than 3 in total length without caudal, greatest depth 5 1/5. Eye about 3, least depth of caudal peduncle 2 1/2 in head. Dorsal 16; anal 16. Gill-rakers large, 6 on upper and 14 on lower part of first gill-arch.

Fig. 14.—Diaphus (Lamprossa) effulgens (Goode & Bean)

Photophores large. Orbital glands destroyed by gastric juices. Br 3; PO 5, second and third close together and far removed from first, fourth high up, higher than upper PVO; VO 5, third highest; AO ant. 6, first and last highest and on same level; AO post. incomplete; Prc destroyed by gastric juices; PLO 1, nearer base of pectoral than lateral line; PVO 2; VLO 1, on level with middle SAO; SAO 5; Pol 1, above and slightly behind last AO ant., nearer latter than lateral line, from which equally far removed as uppermost SAO.

FAMILY ANOTOPTERIDAE

Genus Anotopterus Zugmayer, 1911

Anotopterus pharaon Zugmayer

Fig. 15.

Anotopterus pharaon Zugmayer.  


One postlarva, no. 3071, 47.5 mm. total length without caudal. From sto-

Head 3 1/3, greatest depth 14 in total length without caudal. Snout 1 2/3, eye nearly 7 in head, 4 in snout.

The two palatines bear together 14 teeth of the shape and proportions of those in adult specimens.

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Body and head throughout rather densely pigmented with minute dark brown chromatophores.

Some more adult specimens, also taken from stomachs of *A. ferox*, have come to hand.

**ORDER ISOSPONDYLI**

**FAMILY ALEPOCEPHALIDAE**

*Genus Searsea* Parr, 1957

*Searsea koefoedi* Parr


One specimen, no. 3526, 114 mm. total length without caudal. Taken from stomach of *Aphanopus carbo* Lowe. 17.III.1952. Fair condition.

No essential differences between this and the specimen described in Boletim no. III, but it is interesting to note that the latter was collected in about 100-150 m. depth, whereas the specimen here recorded comes from the stomach of a species which lives in 600-1600 m. depth and is mostly fished at about 1000 m.

**FAMILY STOMIATIDAE**

*Genus Photostomias* Collett, 1889

*Photostomias guernei* Collett


Dorsal 24; anal 28; ventrals 6; pectorals 0. Origin of ventrals in middle of distance between snout-tip and first photophore of A-C series. Basis of anal begins a short distance in advance of that of dorsal and ends at about an equal distance behind it. Lower lobe of caudal much longer than upper. Length of ventrals 1 1/4 in distance between origins of ventral and anal.

Teeth of premaxillaries of greatly varying size, those of maxillaries of similar shape and size, flattened and pointing backwards, 6 on left side and 8 on right. Palatine teeth 4. Near symphysis of lower jaw one greatly enlarged curved canine on each side, its length being slightly less than 3 in lower jaw. All other teeth of lower jaw are small.

As regards proportions of eyes, head and body, as well as fin-counts and photophores there is perfect agreement with the descriptions of numerous specimens of Photostomias guernei, of greatly varying size, rendered by Collett, Regan & Trewavas, Parr and Zümayer. However, several characters of some importance—if we consider that the material of some of the aforementioned authors contained several specimens of nearly the same size as the one here described—disagree so greatly that it is with some hesitation that the author identifies the specimen at hand with P. guernei. In all figures, except in one of a postlarval specimen of about 24 mm., the ventrals reach far back to middle of anal, here they are far removed from the origin of the
Without exception 2 pairs of canines are given for the lower jaw and their length is contained about 5 times in the lower jaw, whereas here there is only one pair, being proportionally almost twice as long. The number of maxillary teeth (6-8) also seems rather low compared to the numbers given by other authors; ZUGMAYER 12, Parr about 21, and Regan & Trewavas show in their figures 27-50.

FAMILY GONOOSTOMATIDAE

Genus *Argyripnus* Gilbert & Cramer, 1897

*Argyripnus atlanticus* sp. n.

Fig. 17.

One specimen, type, no. 5226, 59 mm. total length without caudal, from Funchal harbour, near surface. Caught alive during the night of 14th April 1951, by Mr. Adão Nunes. Very good condition.

Body compressed, with its deepest portion between preopercle and ventrals. Depth of caudal peduncle somewhat less than 2 1/2 in greatest depth. Head moderate, 3 1/3 in total length without caudal. Eye large, slightly more than 2 1/4 in head. Base of pectorals low, its origin distinctly in advance of end of head. Ventrals slightly in advance of origin of dorsal, which is situated about in middle of length without caudal. Base of dorsal short, that of anal long. Origin of anal under middle of base of dorsal. Adipose low, with a long base, its origin in middle of distance between dorsal and caudal. End of base of anal under posterior 1/4 of adipose.

Dorsal 12; anal 27; pectorals 19; ventrals 7; caudal 15, 10/9, 10. Gill-rakers long and finely barbed along their upper edges, 7 on upper and 17 on lower part of first gill-arch. Pseudobranchiae present. Teeth small, curved, in single rows on premaxillaries, maxillaries and limbs of lower jaw. On each premaxillary and maxillary about 24 teeth. Those of the lower jaw much smaller. On each side of the very broad vomer 2 teeth, and 4-5 on each palatine. Scales moderately large, cycloid, somewhat caducous.
Luminous organs on head 5: one slightly in advance of eye, on a level with its lower border, luminous disc pointing towards centre of eye; one small one at posterior border of orbit; one on lower edge of preopercle; one a short distance behind and on a level with it; one very large and conspicuous one on opercle, on a level with the antorbital one. Series on isthmus 6, branchiostegal series also 6. From isthmus to ventrals 10, round, large, not touching, set in a blackish band. From ventrals to 5/7 of base of anal 28 photophores: the first small and higher than second; the second large, and resting directly on the upper border of the base of the ventral fin, up to the ninth organ they decrease in size gradually, the diameter of the ninth measuring only about half that of the second. This row of photophores curves, from its origin, slightly upwards towards the origin of anal, from where it rises somewhat more steeply to half the length of the part situated above the anal, and the last part runs about parallel with the lower outline of the body; all the organs of this series touch each other, and the row is bordered above by a broad, conspicuous, blackish band. Well separated from this series, and at a lower level than the last organ of it, there is a short series of 5 organs, bordered, above and below, by a broad blackish band; the individual organs of this series are distinctly larger than those of the posterior part of the previous series and touch one another. The hindmost series of photophores consists of 18 organs, the second being exactly above the end of the base of the anal, and the last ending where the caudal begins; the row is bordered, above and below, by a moderately broad blackish band, and all the organs touch one another. The upper series consists of 7 photophores, well separated from one another, each placed in the middle of a large modified scale; first above fourth organ of series between isthmus and ventrals, the last touching the first organ of the series commencing at ventrals.

Measurements in mm., taken on a plane, between verticals.

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total length</td>
<td>72</td>
</tr>
<tr>
<td>» without caudal</td>
<td>56</td>
</tr>
<tr>
<td>Head</td>
<td>16.75</td>
</tr>
<tr>
<td>Snout to pectoral</td>
<td>14.25</td>
</tr>
<tr>
<td>» ventral</td>
<td>24.25</td>
</tr>
<tr>
<td>» dorsal</td>
<td>27.50</td>
</tr>
<tr>
<td>» anal</td>
<td>30.75</td>
</tr>
<tr>
<td>» end of dorsal base</td>
<td>54.73</td>
</tr>
<tr>
<td>» adipose</td>
<td>45.25</td>
</tr>
<tr>
<td>» end of anal base</td>
<td>49.50</td>
</tr>
<tr>
<td>Greatest depth</td>
<td>14.75</td>
</tr>
<tr>
<td>Depth of caudal peduncle</td>
<td>6.25</td>
</tr>
<tr>
<td>Greatest breadth of body</td>
<td>8</td>
</tr>
<tr>
<td>Longest ray of dorsal</td>
<td>7</td>
</tr>
<tr>
<td>» anal</td>
<td>7</td>
</tr>
<tr>
<td>» pectoral</td>
<td>13</td>
</tr>
<tr>
<td>Interorbital</td>
<td>4.5</td>
</tr>
<tr>
<td>Longest gill-raker</td>
<td>3.75</td>
</tr>
</tbody>
</table>
Colour on fresh specimen, snout and part of body posterior to ventrals, except for chromatophores, completely colourless and transparent. Parts of opercles, upper part of maxillary, modified scales of upper series of luminous organs silvery. Peritoneum shows blackish silvery through body-wall. Forehead and nape black, a pear-shaped white spot on top, between eyes. Scales in upper half of body-height brown in their centres. All fins transparent, white.

The only other two species of the genus *Argyripnus* so far described are *Argrripnus iridescens* McCulloch and *A. ephippiatus* Gilbert and Cramer, the two being considered possibly not distinct by Norman (1950, Discovery Reports, p. 500) and McCulloch (1926, Biol. Res. "Endeavour", V, p. 171). The characters in which this new species differs most strikingly from them are most conveniently expressed in the following comparison:

<table>
<thead>
<tr>
<th></th>
<th>Rays of anal</th>
<th>Rays of pectoral</th>
<th>Photophores in series from base of ventrals to above anal</th>
<th>Photophores between anal and caudal</th>
<th>Luminous organ on opercle compared to largest of body</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>A. iridescens</em> &amp; <em>A. ephippiatus</em></td>
<td>22-25</td>
<td>16</td>
<td>19-21</td>
<td>13-15</td>
<td>smaller</td>
</tr>
<tr>
<td><em>A. atlanticus</em> sp. n.</td>
<td>27</td>
<td>19</td>
<td>28</td>
<td>18</td>
<td>much larger</td>
</tr>
</tbody>
</table>

Genus *Argyropelecus* Cocco, 1829

*Argyropelecus gigas* Norman

*Argyropelecus gigas* Norman. MAUL, 1949, Bol. Mus. Mun. Funchal, no. 4, art. 9, p. 17, fig. 6.

One specimen, no 5276, 116 mm. total length without caudal. Taken from stomach of *Aphanopus carbo* Lowe. Poor condition.
ORDER ANACANTHINI

FAMILY MACROURIDAE

Genus Coryphaenoides Gunnar, 1761

Coryphaenoides theleostomus Maul

Coryphaenoides theleostomus Maul, 1951, Bol. Mus. Mun. Funchal, no. 5, art. 12, fig. 2 & 4a.

Two specimens, nos. 5285 and 5297, 170 mm. and 195 mm. in predorsal length, respectively. Former from Câmara de Lobos, 16. I. 1952, latter from Funchal fish market, 22. II. 1952. According to fish merchant this latter was caught on tackle for Polyprion americanum, ca. 500 m. Both in very good condition, no. 3285 has part of the tail missing.

First dorsal 12; pectorals 21; ventraIs 8. Gill-rakers large, tubercular, covered with spines, 7 on lower part of second gill-arch. Other characters like in type.

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